



Technology Insertion Hardware 16/18 Industry Day Full and Open Competition

Matthew Severson
Deputy Program Manager, PMS
425B
202-781-3749
Matthew.r.severson@navy.mil

CAPT Zimmerman, USN
Program Manager, PMS 425
202-781-0791
John.d.zimmerman1@navy.
mil



Industry Day - 7 May 2013



- **Welcome**
 - Introduction
 - Rules of Engagement
- **Team Overview**
- **Technical Insertion Hardware Description**
- **Rapid COTS Insertion Model**
- **Tech Insertion Approach**
- **Implementation**
- **Procurement Concept**
- **RFP Projected Schedule**



This briefing is for informational purposes only to enhance Industry's understanding of the Team Submarine Technology Insertion Hardware (TIH)16/18 procurement.

If issued, the formal solicitations are the documents upon which Industry should rely on for the purpose of submitting a Proposal.



Introduction

- **Welcome to the Team Submarine Technology Insertion Hardware Industry Day**
- **Please make sure you have signed in at the Registration desk**
- **Restroom Locations//Nearest Exit Information**
- **Purpose of this Industry Day**
 - Provide an element of Market Research
 - Inform Industry
 - Seek feedback



Rules of Engagement

- **Oral questions will be addressed throughout the presentation**
 - Items that will not be discussed: price, current contract performance and/or issues, and evaluation criteria
- **Questions submitted via index cards will be addressed on Navy Electronic Commerce Online (NECO)**
- **All questions and answers will be posted to NECO**
 - However, some questions may be addressed directly in solicitation and may not be posted to NECO
- **Industry day slides will also be posted to NECO**
- **No side bar discussions with Government representatives will be held**



TIH 16/18 Team Overview

NUWC DIVISION KEYPORT - CONTRACT LEAD

Email: KYPT_WA_TEAMSUB_TIH@navy.mil

Phone: (360) 315-3429

Contracts Team

Technical Team

PCO - Karen Smith

TPM - Greg Pittard

Contracting
Specialist
Katie Harrigan

Technical Lead
Amanda
Andrikopoulos

Tech Insertion 16/18 Integrated Product Team

Submarine
Acoustic
Systems
(PMS401)

Submarine
Combat and
Weapons Control
Systems
(PMS425)

**Submarine Warfare Federated
Tactical Systems (SWFTS)**



What Is TI Hardware?

- **TIH 16/18 will provide the latest generation display, processor and network units to Team Submarine systems**
- **Anticipated components include**
 - Computer processing and memory
 - Data storage and extraction
 - Input/Output (I/O) interfaces to support processing systems designed around commercially available hardware and software
- **Procurements may include**
 - Upgrade kits, enclosures, and / or full up systems for SEAWOLF, SSBN, SSGN, 688/688i, VIRGINIA Class, COLLINS Class and future submarine systems/platforms



Notional TI Hardware



A3	FM5, PCM, EM2
A4A1	8x8 DVI-D Video Sw
A4A2	8x8 Cable Mgmt
A4A3	Tray: HUBs, LEX.
A4A4	DVI Converters
A5	HEAT EXCHANGER
A6	PWR DIST ASSY
A7	EMI FILTER
A8	DC PS
A9A1	HP A5820 24 SFP+
A9A2	HP A5820 24 SFP+
A9A3	DP 1 (S01)
A9A4	DP 2 (S01)
A9A5	DP 3 (S01)
A9A6	DP 4 (S01)
A9A7	DP 5 (S01)
A9A8	AP 1 (S06)

ECDWS



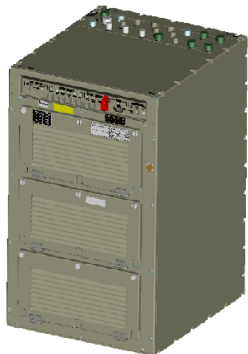
A2A1	SPORT KVM
A2A2	SPORT KVM
A2A3	HEAT
A2A4	EXCHANGER
A2A5	TRN & REC-1 CNV
A2A6	TRN (S01)
A2A7	STORAGE PROCESSOR (S06)
A2A8	TTWCS (T106-S11)
A2A9	TTWCS (T106-S11)
A2A10	TTWCS (T106-S11)
A2A11	TTWCS (T106-S11)
A2A12	MDS (S06)
A2A13	MAINTENANCE TERMINAL
A2A14	IA FW (S06)
A2A15	YOP (S07)
A2A16	AP (S06)
A2A17	USB & Cables
A2A18	ISIR MCU (S01)
A2A19	TecOES (T106-S12)
A2A20	TecOES (T106-S12)
A2A21	PP (S06)
A2A22	LPH Cables
A2A23	LFH (S10)
A2A24	HP5820
A2A25	HP5800-24G-SFP
A2A26	SLIDE CABLES
A2A27	EHF CI
A2A28	PCD
A2A29	PPP 1 PCD
A2A30	PPP 1 PCD
A2A31	EMF
A2A32	EMF
A2A33	EMF

MFS



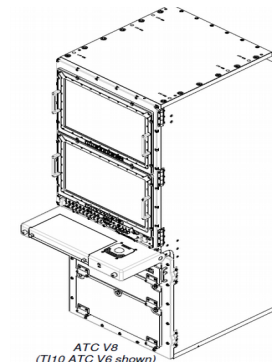
HDW V5
(HDW V4 Shown)

HDW



A3A1	FM5
A3A2	PWR DRAWER
A3A5	VD : 8x8 SW & MA
A3A6	AIR Baffle
A3A7	HP A5820 24 SFP+
A3A8	CABLEWAY
A3A9	TI12-S03
A3A10	(RECORD)
A3A11	TI12-S16 (AP)
A3A12	TI12-S01 (DISP)
A3A13	TI12-S03 (RECORD)
A3A14	USB to FIBER (2)
A3A15	TI12-S01 (DISP)
A3A16	TI12-S03 (RECORD)
A3A17	TI12-S03 (RECORD)

AEC



ATC V8
(TI10 ATC V6 shown)

ATC

A1	HEAT EXCHANGER, PCM, FM5
A2	HEAT EXCHANGER, PCM, FM5
A3	HEAT EXCHANGER, PCM, FM5
A4	HEAT EXCHANGER, PCM, FM5
A5	HEAT EXCHANGER, PCM, FM5
A6	HEAT EXCHANGER, PCM, FM5
A7	HEAT EXCHANGER, PCM, FM5
A8	HEAT EXCHANGER, PCM, FM5
A9	HEAT EXCHANGER, PCM, FM5
A10	HEAT EXCHANGER, PCM, FM5
A11	VD : 8x8 SW & MA
A12	AIR Baffle
A13	HP A5820 24 SFP+
A14	CABLEWAY
A15	TI12-S16 (AP)
A16	TI12-S16 (AP)
A17	TI12-S16 (AP)
A18	TI12-S16 (AP)
A19	TI12-S16 (AP)
A20	TI12-S16 (AP)
A21	USB to FIBER (1), DIGIPOINT, EM2
A22	TI12-S03 (RECORD)
A23	TI12-S03 (RECORD)
A24	TI12-S03 (RECORD)
A25	TI12-S03 (RECORD)
A26	TI12-S03 (RECORD)
A27	TI12-S01 (DISP)
A28	TI12-S01 (DISP)
A29	TI12-S01 (DISP)
A30	TI12-S01 (DISP)
A31	TI12-S03 (RECORD)
A32	TI12-S03 (RECORD)

ECDWS: Enhanced Control Display Workstation

HDW: Horizontal Decision Workstation

MFS: Multi-Function Station

AEC: Auxiliary Equipment Cabinet

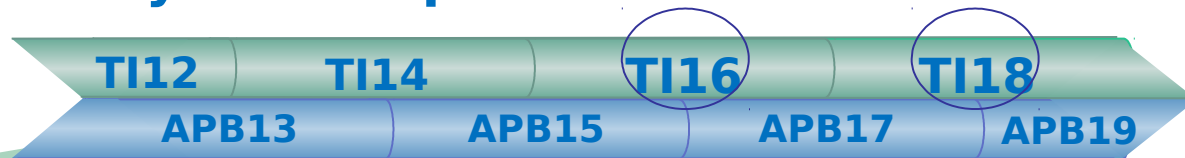
ATC: Advanced Tactical Console



Rapid COTS Insertion

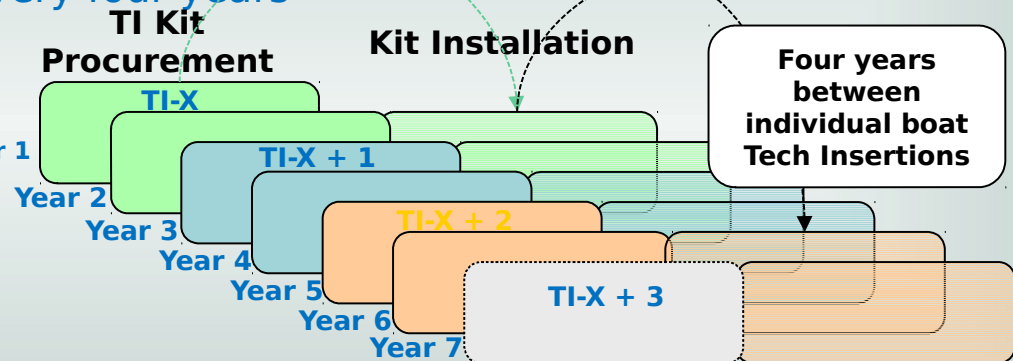
Goals

- Keep pace with technology
- Minimize obsolescence
- Ensure continuous opportunity for system improvements



Uninterrupted Cycle of Tech Insertion Procurements and Installations

- **Plan of Record:** TIs fielded every two years, individual boat upgrades every four years
- **Maintains production industrial base**
 - Ensures trained personnel for manufacturing and testing
- **Uses “state of the practice” hardware vice “state of the art”**
- **Ensures broad industry support and competitive pricing**





Tech Insertion Approach

- **Standardize the method for regular updates**
 - Migrate technology on Model Year approach across platform types > target every ~2 years
 - Incorporate plan for an individual platform technology upgrade cycle > target every ~4/5 years (every other TI)
- **Develop a system that delivers best value to the Government**
 - Achieve tighter coupling between design/development, and subsequent production for increased cost savings
 - Consolidate number of processing, network and OS variants as technology allows
 - Utilize low cost commodity elements and minimize non-recurring effort for hardware
- **Create efficiencies, reduce risk, and improve overall system reliability**
 - Provide the mechanical infrastructure to ease technology migrations
 - Minimize shipyard / platform impacts
- **Follow market trends of commercial products**



Implementation

- **Approximately 7-12 Platform upgrades per year including new construction units**
- **Individual platforms will receive every other TI**
 - Upgrades every 4 to 5 years
- **Reduced non-recurring effort for hardware development, training and logistics products**
- **First Technology Insertion (TI) introduction occurs 1st quarter every odd Calendar Year (CY)**
- **Sonar and Combat Control installations are aligned**



Defining the Product

How do we tell you what we need?

INITIAL REQUIREMENTS

Program Offices establish requirements for their TI baselines

- Power, weight, cooling
- Installation
- Functionality / capability
- Cost threshold

Sonar and Combat
(TC/WC)



DESIGN & DEVELOPMENT

*Tech Insertion IPT
Conducts Initial Design
and Development*

- Benchmarks products
- Establishes footprints and unit 'stack-ups' within the footprint
- I/O requirements
- Product selection

PARM Reps
System Developers
TI Hardware Contractor

TI Hardware Contract Relevancy

- **Contractor early involvement**
- **Participate in TI IPT & work with PARMs to develop early design concepts & requirements**
- **Contractor will be provided GFE:**
 - **Technical Data Package (TDP)**
 - **Installation Control Drawings (ICD)**
 - **Configuration Item Specification (CIS)**
- **Contract Vehicle**
 - **CPIF for NRE**
- **Desire to provide incentive for:**
 - **Technology innovation, evolution & commonality**
 - **Flexibility**
 - **Teamwork**
 - **Ease of construction / installation**
 - **Ease of maintainability**



Building and Testing

Building & Testing Hardware

- Develop build & test procedures
- Initiate logistics development
- Procure COTS HW for PARM early I&T
- Build Engineering Development Models (EDM)
- Develop plan for EQT; conduct EQT testing (if applicable)
- Accomplish performance testing against specifications
- Incorporate feedback into design and ILS
- **Interface with PARMs and TI IPT on all efforts**



TI Hardware Contract Relevancy

- **Contract Vehicle**
 - **CPIF for Development / Design NRE**
 - **CPFF for Procurement of EDMs and advanced integration hardware**
- **Desire to provide incentive for:**
 - **Flexibility**
 - **Teamwork / cooperation**
 - **Workmanship and reliability**
 - **First pass quality**

*Upon design approval from PARM & TI IPT



Producing Hardware

Transition to Production

- Complete design
- Prepare final production drawing package for orderable configuration
- Complete ILS

Hardware Production

- Produce kits, enclosures or other hardware as required
- Factory Acceptance Testing
- Work with vendors

Installation & Field Support

- Install kits or hardware
- Provide support services for installed hardware



TI Hardware Contract Relevancy

- **Contract Vehicle**
 - FPIF for production
- **Desire to provide incentive for:**
 - **Quality**
 - **Cost**
 - **Schedule**
 - **Workmanship**
 - **Reliability**



Procurement Concept

- **Type of Award**
 - Competitive
- **Contract Type**
 - ID / IQ for Engineering Services, Production and Support
- **Contract Incentives**
 - Cost Plus Incentive Fee (CPIF) for Services
 - Cost Plus Fixed Fee (CPFF) for Hardware Procurement
 - Fixed Price Incentive (Firm Target) (FPIF) for Production
- **Period of Performance anticipated to be**
 - One Year Base Period and Six Option Periods
- **Proposal due 45 days from RFP release**
- **Written volumes only, no oral presentations**



Additional Information

- **Statement of Work (SOW) and CLIN Structure posted on NECO**
- **Industry Next Steps**
 - Electronic Technical Information Center (ETIC) will be available June 2013
 - ETIC availability and access procedures will be posted on NECO
- **Tentative Schedule**
 - RFP release planned ~August 2013
 - 45 days for proposal
 - Target 4th QTR FY14 award